



The impacts of local human activities on the Antarctic environment

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An overview of a recently published review of the scientific literature from the past decade on the impacts of human activities on the Antarctic environment is presented. An assessment of the cumulative effects of scientists and accompanying base construction, tourists and fishery activities in Antarctica is timely given a decade since the Protocol on Environmental Protection to the Antarctic Treaty came into force in 1998 and the increasing attention given to and human presence in Antarctica during this 2007-2009 IPY.

A range of impacts has been identified at a variety of spatial and temporal scales. Chemical contamination and sewage disposal on the continent have been found to be long-lived, with contemporary sewage management practices at many coastal stations insufficient to prevent local contamination. Human activities, particularly construction and transport, have affected Antarctic flora and fauna and a small number of non-indigenous plant and animal species has become established on some of the Antarctic Peninsula and sub Antarctic islands. There is little indication of recovery of overexploited fish stocks, and ramifications of fishing activity on bycatch species and the ecosystem could also be far-reaching.

The Antarctic Treaty System and its instruments, in particular the Convention for the Conservation of Antarctic Marine Living Resources (CCAMLR) and the Environmental Protocol, provide a framework within which management of human activities take place. In order to ensure comprehensive protection of the Antarctic environment, including its intrinsic, wilderness and scientific values in the face of the continuing expansion of human activities in Antarctica, a more effective implementation of a wide range of measures is essential. These include effective environmental impact assessments, long-term monitoring, mitigation measures for non-indigenous species, ecosystem-based management of living resources, and increased regulation of National Antarctic Programmes and tourism activities.